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# THE PROGRESSIVE FARMER



# FARMER

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THE INDUSTRIAL AND EDUCATIONAL INTERESTS OF OUR PEOPLE PARAMOUNT TO ALL OTHER CONSIDERATIONS OF STATE POLICY.

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## Agriculture

ALL AROUND THE FARM.

EDITED BY BENJ. IRBY, RALEIGH, N. C.

Prof. B. N. Irby, late Professor of Agriculture, Agricultural and Mechanical College, Raleigh, has become a regular contributor to this department. All questions relating to the farm, garden or orchard will be answered by Prof. Irby.

### AGRICULTURAL ITEMS.

#### HARROWING SPRING GRAIN

Now that time for sowing spring grain has come, there is one caution which every grain sowing farmer should heed. That is, to harrow the soil where the seed has been cast, not only when it is sown, but after every rain heavy enough to compact the surface and make a crust on the soil as it dries out. If this is done once or twice before the grain comes up, the grain will grow rapidly and will itself prevent further packing of the surface by rains.

#### PLANTING BEANS WITH CORN

It used to be the practice more than it is now to plant one or two beans in each hill of corn that is eaten out by the cut worm. It makes much extra work to harvest these beans. But the plan is perhaps better than to plant in late some more corn that will not be ripened with the other, and can be used only for feeding as soft corn. The corn shades adjoining corn too much. Beans of the bush variety will not shade it as all. The extra sunlight which gets down to the soil where a hill of corn has been destroyed makes the corn hills on either side more prolific than they would have been.

#### EXTRA FEED FOR YOUNG LAMBS.

The young lamb grows very rapidly the first few weeks of its life. But unless given some extra feed besides what its dam furnishes the lamb will soon get too little, and its growth will be stunted. A little clover hay to begin with may be fed to each lamb, and if this is followed by a gill of whole oats, the lamb will thrive so well that its growth will never be checked. Even less oats than this will be enough if the lambs have all the clover hay they can eat. This feed may be varied by giving wheat bran fed dry in the troughs which should be made for that purpose, and so protected that lambs cannot put their feet into them.

#### SPRAY APPLE TREES EARLY.

The first spraying of the apple orchard ought to be made before the buds have burst into leaf. At this time fungicides may be safely used much stronger than would be safe after the tree is in leaf. There are many spores of fungus not yet developed on the branches ready to burst forth and develop their spores so soon as the leaves appear. If this early spraying is thoroughly done, it may make it unnecessary to spray for fungus until the leaves have become so hardened that the lighter applications that will then be needed will do no injury. While the trees are being sprayed now, it will be well to put in some Paris green to head off the young larva of the bud moth, which always begins by boring into the buds sometime before they burst into leaf.

#### CLOVER IN STRAWBERRY BEDS

One of the worst pests to careless strawberry growers is that their beds on rich lands so rapidly grow up with clover. The white clover is much the worst, as it, like the strawberry, propagates by runners, which will make an amazing large spread in rich land in a single season. The only consolation the strawberry grower has is that the white clover plants help enrich the soil, though they do this much less effectively than red clover. Not only is the white clover plant much smaller than red clover, but its numerous small runners rob the soil of moisture. They are, besides, too small to produce the nodules on the roots which enrich the soil by decomposing the air which the soil contains. This does not often happen to clover plants till in the second year of their growth.—American Cultivator.

#### TRUCKING IN CRAVEN COUNTY.

Correspondence of the Progressive Farmer. The truckers of this vicinity have been much scared, but little hurt recently, on account of the cold snap of week before last. The thermometer registered 30 degrees two mornings and ice formed nearly a quarter of an inch thick in exposed places; the frost was quite heavy two mornings, besides two other light frosts, and yet some very tender plants escaped with little

injury. Beans were up in some places and are not very seriously injured, though they are hurt more, perhaps, than any other truck except cucumbers; these were killed generally, unless covered. Some farmers covered up their beans and potatoes with plows but those covered are not much better looking now than the ones not covered. In some instances the cold seemed to do good.

The strawberry crop was not hurt seriously even where not covered with straw, and they are now ripening and being shipped. Fruit is not hurt, and the peach crop, especially, is now too large for good fruit; not even enough killed to thin the crop to a proper quantity. One farm near New Berne used, it is said, 25 cords of wood about the farm, smoking the crops to keep off the frost. Sawdust and kerosene were used freely for similar purposes. Cabbage are being shipped; the crop seems now to be an average one.

We can only account for the little damage under such low temperature, from two prevailing conditions: Scarcity of moisture in the ground, and there having been so much warm weather early that the ground was warmer than usual and kept the frost from entering the soil.

We have had no hard rains this winter, and the showers this spring are very nice and gentle. It is cool now and a beautiful weather for work. Farmers, notwithstanding the great scare, and some hurt are hopeful, thankful, and earnestly pressing their work. We have had fewer days' hindrance on account of rain and wind this spring, than any we remember heretofore, and some of us can remember more than half a century back. D. L. Bellair, N. C., April 16, 1898.

#### ARTICHOKES.

Correspondence of the Progressive Farmer. I have seen several articles in your valuable paper in regard to raising artichokes for hog feed. I am convinced that artichokes is the proper feed to fatten hogs on. Last year I saw advertised in an Illinois paper French artichokes for sale; so I sent and bought 25 cents' worth from which to raise seed. I received them in bad order. All were rotten except enough to plant eleven hills. I planted them two feet apart and dug them this spring, as I let them stay in the ground all winter, and the yield surprised me. I dug from eleven hills three bushels of good sound artichokes. I planted them the first of April at the rate of one and a half bushels to the acre. I cut them as I would Irish potatoes. Every piece had an eye. I am satisfied that they will fatten my hogs this fall. Our farmers should plant them for hogs, and save their corn for other purposes. Respectfully, J. L. COOPER.

Gum Neck, N. C.

#### STUDY YOUR SOIL.

Every farmer, and especially every one who is trying to raise fruit, says the North American Horticulturist, should be well posted as to just the condition of his soil, so as to be able to select intelligently the varieties which are suited to his particular locality. Bulletin No. 94 of the New York Experiment State contains the following suggestions, which will enable any intelligent man to tell with a fair degree of accuracy what his soil chiefly needs in the way of plant food. When he finds out what is needed it is a very easy matter to procure the necessary fertilizer:

1. As a rule lack of nitrogen is indicated when plants are pale green in color, or where there is a small growth of leaf or stock, other conditions being favorable.

2. A bright, deep green color, with a vigorous growth of leaf or stalk, is, in case of most crops, a sign that nitrogen is not lacking, but does not necessarily indicate that nitrogen could not be used to advantage.

3. An excessive growth of leaf or stalk, accompanied by an imperfect bud, flower and fruit development, indicates too much nitrogen for the potash and phosphoric acid present.

4. When such crops as corn, cabbage, grass, potatoes, etc., have a luxuriant, healthful growth, an abundance of potash in the soil is indicated; also when fleshy fruits of fine flavor and texture can be successfully grown.

5. When a soil produces good, early-maturing crops of grain with plump and heavy kernels, phosphoric acid will not generally be found deficient in the soil.

#### THE VALUE OF COW PEAS.

Dr. Stubbs, of the Louisiana station, in summing up the advantages of the cow pea, gives these points:

1. It is a nitrogen-gatherer.  
2. It shades the soil in summer, keeping it in condition most suitable to rapid nitrification, and leaves the soil friable and loose, in the best condition for a future crop.

3. It has a large root development, and hence pumps up from great depths and large areas the water, and with it the mineral matter needed by the plant.

4. Its adaptability to all kinds of soils, from stiffest clays to most porous sands, fertile alluvial bottoms to barren uplands.

5. It stands the heat and sunshine of Southern summers.

6. Its rapid growth enables the farmer to grow two crops a year on the same soil.

7. It sown thickly it will by its rapid growth and shade effectually smother all weeds, and thus serve as a cleaning crop.

8. It is a good preparatory crop; every kind of crop grows well after it.

9. On the alluvial lands of the Mississippi bottoms it serves to pump off excessive water, evaporating it through its great foliage, thus keeping the soil in a condition for most rapid nitrification during the entire growing season.

10. It furnishes a most excellent food in large quantities for both man and animals. With all these advantages, it is no wonder that it is called the "clover of the South," and were it used regularly, as one of the crops in a regular but short system of rotation, the soils of this section would soon rival in fertility their primitive condition.

#### MANURING WITH SUNSHINE.

Prof. Gerald McCarthy, who is so well known in North Carolina, talks pleasantly in a recent issue of the American Cultivator on the question of manuring with sunshine. He says: The fertilizing power of summer sunshine is not fully appreciated by farmers. Sunlight striking a bare or fallow field does not add to its productiveness, neither does it improve the quality of stable manure exposed to its direct rays. Yet the sun is the original source of all terrestrial energy of whatsoever kind.

It is generally admitted that the food which growing plants get from what are called arable soils is usually lacking in three elements. These three elements are phosphoric acid, potash and nitrogen. The first two exist in nature only as solids or liquids. Nitrogen exists in inexhaustible quantities as a gas in the air we breathe. Potash and phosphates we must dig out of the rocks or buy of those who dig them. Nitrogen exists all about us, and we only need to set traps to catch it. We can buy phosphoric acid and potash for from four to five cents a pound. For nitrogen in commercial fertilizer we have to pay from 15 to 18 cents a pound. Nitrogen is necessary for growing plants, but so is moisture and warmth. For certain crops, such as early vegetables, it is often profitable to provide moisture, heat and nitrogen by artificial means, but for staple crops this policy would be ruinous.

We can draw upon the stock of nitrogen in the atmosphere by means of sunlight acting upon and vitalizing leguminous crops, such as clover, vetches and peas. All of these can be grown as "between crops," so as not to interfere with the regular crops. Clovers can be sown in the stubble of small grain, or even with the grain seed. Vetches and peas can be sown in standing corn at the last cultivation.

The selection of a crop to be used as a nitrogen trap depends largely upon the locality, soil and system of rotation. For States south of the Ohio and Potomac rivers, the cow pea, crimson clover and sand vetch are the three most satisfactory. For more Northern States red clover, Canada pea and winter vetch promise most.

In general, any legume known to thrive upon the soil will be satisfactory as a nitrogen trap. When such a legume is once found and adopted, it should be continued year after year, as these crops never give the best results until they have been grown upon the same field for several seasons, the longer the better. Rye, turnips and other non-leguminous crops which are sometimes turned under are of no value as nitrogen gatherers.

All the legumes named, except sand

vetch, make valuable fodder, and their use as fodder does not detract from their value as fertilizers, if fed upon the farm and the resulting manure returned to the land.

For soils too sandy to produce good clover or winter vetch, blue and white lupines and sand vetch are recommended for all but the coldest parts of the United States. These latter three are worth less as fodder.

To secure the best results, these crops must be abundantly supplied with phosphoric acid and potash food. From 100 to 200 pounds of muriate of potash, and from 200 to 400 pounds of acid phosphate per acre is a good application. Nitrogen of ammonia is not needed. The purchased food given remains in the soil, if the green crop is turned under, for the next regular money crop, so we get double service from it and can afford to use it with a liberal hand. This is the best and only rational way to enrich both farm and farmer.

#### MILLET AS FEED.

Dr. Galen Wilson says that millet is liable to have disastrous effect upon the kidneys of animals. "There seems but little danger if cut before seed forms, and then fed green, or properly cured, and fed as hay; but a large majority of farmers are so careless that they will not heed this warning, and illness of animals and veterinary calls ensue. A few farmers grow and feed it with apparent advantage; but they are of a class who always do things timely and in order."

So it seems that the fault is not with the millet, but with the farmer. A writer in Wallace's Farmer says:

"The Farmer cast some doubts some time ago as to the value of millet hay as a feed for horses. In my opinion the trouble was that it was cut too late. Millet hay should be cut when the seed is in the dough state. I have fed it for five years, and sometimes exclusively, and my horses are in good condition, better than when kept on wild hay. I know a man who has fed millet hay for three years and has never had a lean horse, but he has some fat ones. If the seed gets too ripe, it will have a bad effect on the kidneys, but cut in time and cured in good condition, when you feed a forkful you will not have to rake half of it up to bed with, as you do with wild hay."

#### A SIMPLE CLOD CRUSHER.

A very cheap and effective clod crusher, writes M. L. Bell, in an exchange, can be made by connecting a number of round heavy poles together with chains. Staples are driven into the ends of each pole by which the pole is fastened to the links of a chain which connect them all together. The ends of the chain are furnished with a ring, to which the clevis of the double tree is attached. Being flexible, the drag conforms itself to uneven surfaces. Such an implement will be found very useful for leveling corn stubble, breaking clods in heavy ground, flinging lumpy manure and smoothing ground in the garden where the seed drill is to be used.

#### LIME.

Applying Lime.—Our best agricultural authorities, including our best farmers, are recognizing more and more the value and necessity of an abundance of humus in the soil. Where it is, there usually is fertility. A heavy clover sod is one of the best sources of this element, but clover does not always come when wanted. Excepting an abundance of stable manure as a top dressing, which cannot always be had by the farmer, I believe that a dressing of lime is the best agent for securing clover. This is the experience of thousands of farmers. Formerly it was the practice to use 200 or 300 bushels of lime to the acre, and an application was out of the question for all except those who could burn and apply their own lime. The expense was too great for the man who did have the stone on his farm. It has been found, however, that these heavy dressings are not the best, unless possibly for the softest limestone soils that, queerly enough, require more lime than other soils. Many farmers now apply from 25 to 40 bushels of lime to the acre, with most satisfactory results. Such an amount is within reach of the farmer who must buy his lime, provided the freights are not too high.

When to Apply Lime.—The old time heavy applications were usually made to grass land the summer preceding

breaking for a tilled crop. There was lime enough to waste, and any way was a sufficiently good way. In case of a light application, according to modern usage, I should prefer to make it as a top dressing on an inverted sod, if benefit to a spring crop was wanted, but preferably to land broken for wheat, if clover is the chief object. Lime sinks, and the application should be kept near the surface. It must be borne in mind, however, that it should not be left exposed to the air, but needs immediate mixing with the surface soil. When exposed to the air it reverts to the original chemical form in which it existed before burning. Thorough mixing with the top soil by use of the disc harrow in preparing the seed bed for wheat puts the lime where it will do the most good in releasing plant food in the ground.

The Action of Lime.—Lime is rarely needed as a plant food, it is said, but it breaks up tough plant food in the soil. For this very reason it should be used to grow such a crop as clover, which restores organic matter to the soil. Lime, without sods or manure, impoverishes land beyond a doubt. It makes available the store in the soil, and that means good crops so long as the store lasts; but good farming demands that we keep the supply of organic matter renewed, therefore the necessity of sods with lime. Where clover is failing throughout some of our States, I incline to the belief that applications of lime in moderate amounts offer a surer road to more clover than do our commercial fertilizers, though such a rule would have its exceptions. Agricultural lime may be bought at nine for six or seven cents a bushel, while builders' lime is 50 per cent. higher. Where a farmer has the stone and fuel for burning on the farm, the cost a bushel is trifling. The prevailing prejudice against lime is largely due to its unintelligent use in the past. A heavy application, while somewhat costly, brought crops for a few years, and when they diminished, other applications followed, no thought being given to the necessity of giving the land an abundance of vegetable matter to replace that which the lime was breaking up and preparing for use of growing plants. In time the organic portion of the soil was used up, and sterility followed. A light application—25 to 40 bushels—every five or six years, to secure good stands of clover, is a rational and profitable use of lime. Western dealers sometimes allow only 70 pounds for a bushel of unslaked lime, but I have in mind, when giving these figures, the old time, honest bushel of 80 pounds. Air slaked lime is not as valuable as water slaked. The buyer should bear in mind that lime absorbs moisture in slaking, thus increasing the weight, and he can afford to buy and draw only the unslaked.—David, in Farm and Fireside.

#### SOME HINTS FOR GARDENERS.

The garden, like the farm, to be at its best, demands a rotation, writes a Clark county, Ga., farmer, Mr. H. B. Mitchell, in Practical Farmer. No crop can thrive and do as well if continuously occupying the same spot, as if changed as it. While all crops exhaust the soil, it is not in the same degree. One plant will take up a larger per cent. of some element than another, consequently rotation plays an important part in keeping up the soil's fertility. Then some crops are so favorable for the propagation and growth of weeds, that if continued long upon the same ground the labor of cultivation would be greatly increased.

Again, insects which feed upon certain plants deposit their eggs in the ground during the occupancy of it by that species of plant, ready to injure, if not destroy, the succeeding crop, when by changing its locality they die from lack of proper food. Shallow rooted plants draw their nutriment mainly from the surface, while deep rooted plants depend upon lower strata, hence to derive the full benefit of the entire soil, a change of crops is essential.

We also must have a succession of crops each year. As fast as one is removed another should occupy its place. One-fourth of an acre thoroughly manured and cultivated, upon which a constant succession is practiced, yields more than an acre as ordinarily managed. Every garden should contain a hotbed for starting early plants and cold frames for hardening off hotbed stock preparatory for setting in the open ground, as well as for wintering the more hardy kinds. In each case these should front towards the south. Among the principal implements needed in the garden may be mentioned the turning and subsoil plows, harrows, roller, marker, seed-drill, cultivator, spading fork, horsehoe, wheel hoe, rake, transplanter, trowel, dibber, hand-weeder, reel and line, watering pot, sprayer, wheelbarrow, numerous plant protectors to keep off frost in early spring, or the heated rays of the sun after transplanting, and lastly, a water barrel on wheels, in which water or liquid manure may be conveniently conveyed to the garden.

#### HORTICULTURE

##### HORTICULTURAL HINTS.

Keep all ashes for the trees.

Peach trees do better when well cultivated.

An orchard uncared for will surely be unprofitable.

The gooseberry flourishes best in deep, moist, but not wet, soil.

Generally there is no advantage in cultivating the orchard deep.

When it can be avoided do not prune the grape vine after the sap starts.

Potash is the food material that orchards are most likely in want of.

Pears need a rich soil. Lack of fertility is often the principal cause of failure.

On the production of an overcrop it costs the tree more to ripen seeds than to make the fruit.

Pop corn will mature if planted late. It pops best if kept until the second year after it is harvested.

Tomatoes, it has been found by experiments, ripen sooner when exposed to electrical influences.

Give trees plenty of room if you would have them thrifty and vigorous and bear large, well matured fruit.

Potatoes may be planted quite early, as it will take sometime for them to make an appearance above ground.—Western Plowman.

Plant your orchard on strong soil. Use two year old stocky trees.

Potatoes will go higher and higher before the next crop comes.

The Downing gooseberry is considered the best American berry.

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After all the foregoing suggestions have been carried out, a good garden is still anything but an assured fact; one of the most important steps yet remaining. This is the selection of seed. Unless sound, well matured seeds of good quality are planted, disappointment will be the result. The seed supply should be procured of a seedman, who is backed by a reputation for reliability. They should be planted as their nature demands, neither too deep, too shallow, nor in a soil too cold, too wet, or too dry, an exercise of judgment being necessary to determine just how and when. More seed should be planted than required for a stand, the excess of plants being thinned out after growth has well begun. Seedsmen often get the blame, when the entire fault rests with the planter.

Cultivation should be often enough to kill the weeds and grass before they get their heads above the surface. This lessens work, preserves moisture and increases the crop. The successful gardener has constantly to wage war against insects as well as weeds in his efforts for supremacy.

These insects are ever on the increase, partly from the continued growth of the gardening industry, in many instances no means being taken for their suppression, causing them to multiply; but more particularly from the extermination of the birds, so that the gardener to succeed has to be diligent, studious and watchful. If for market, after his crops are made, his work does not end here. He must now get his produce in such shape as will please the eye, as well as the palate of his customers, success depending as much upon appearance as anyone thing. He must be attentive and prompt in his efforts to please his patrons, treating all with equal fairness and consideration, whether the order be to the amount of five cents, or as many dollars, making their interest his.

There is no portion of the farm when rightly managed that will pay so well for time and work expended, or from which more real pleasure can be derived, than the much-abused and still oftener neglected garden.

Apple trees should be planted about 35 feet apart.